

When we think of science fiction, if we strip away all the space battles, alien monsters and big explosions, it might seem that we would be left with a genre that is profoundly secular and materialist, free from any concern with the supernatural or the spiritual. But sf is also part of our wider culture; it plays off it and builds on it in all kinds of ways.

Indeed, Adam Roberts, in his *The History of Science Fiction* (2006) argues that one of the sources – or perhaps an early manifestation – of sf is a sixteenth- and seventeenth-century theological debate, primarily Catholic but also taken up by Protestants, on the plurality of worlds. Could there be other worlds inhabited by other beings like us? Were they fallen races? Did Christ have to die again for each of them?

As Roberts writes, ‘unsupported by scriptural authority, the very notion of other inhabited worlds flirts with heresy, which lends the topic a dangerous flavour for more than 100 years’ (50). Both Johannes Kepler and Cyrano de Bergerac wrote fiction in which the Moon is inhabited – but chose not to have these tales published while they were still alive. Palingenius – real name Pietro Angelo Manzoli – was less careful. As Roberts states, in his ‘speculative cosmology ... *Zodiacus Vitae* (‘Living Zodiac’), originally published in Italy in 1537’, Palingenius pointed out that some people considered every bright star to be a world, and supposes that their inhabitants count our dark planet as the least among all the heavenly bodies. Despite his circumspection in attributing such ideas to others, he was ‘classified as a heretic of the highest class in the Papal Index’ (50).

Leap forward into 20<sup>th</sup> century sf, and the same sort of questions are explored in CS Lewis’s *Out of the Silent Planet* (1938), *Perelandra* (1943) and *That Hideous Strength* (1945), books I find hateful – the more mean-spirited they become, the worse the quality of the writing (and thinking). American writers also explore such questions, as in James Blish’s *A Case of Conscience* (1958); Harry Harrison’s ‘The Streets of Ashkelon’ (1962); and Mary Doria Russell’s *The Sparrow* (1996) and *Children of God* (1998).

In a rather different vein – weirder and more horrific – HP Lovecraft’s Cthulhu stories of the 1920s and 1930s create a thoroughly non-supernatural universe in which the age and immensity of which renders alien species as kinds of diseased gods.

Perhaps more interesting as a backdrop for Carl Sagan’s work is a tradition of atheist but nonetheless religious sf. Olaf Stapledon’s *Starmaker* (1937) is overwhelmed with awe at the unbelievably vast magnitudes – both space and time – of the universe, itself just one cosmos among many, that in the end novel it copes with the sublime by imagining a kind of prime creative energy or force. Stapledon’s successor in this tradition is of course Arthur C Clarke, especially in *Childhood’s End* (1953) and *2001: A Space Odyssey* (1968), both of which are set in quite rigorously material universes, but in which the possibility of transcendence remains – albeit as an evolutionary experience cast in quasi-spiritual terms. (Clarke’s *2001* provides Sagan with the notion of hyperspace or wormhole travel as a kind of massive interstellar railway system; in the later stages of the film, John Hurt’s character increasingly resembles Clarke.) Stanley Kubrick’s film version of *2001* (1968) is much more oblique and ambiguous, skipping exposition in favour of a kind of overwhelming sensory experience – which Robert Zemeckis’s *Contact* (1997) also attempts – as did films such as *The Black Hole* (1979) and *Star Trek: The Motion Picture* (1979) before it. But all of them lack Kubrick’s cool, misanthropic tone.

Sagan's own position seems to lie somewhere between Kubrick's film and Robert Zemeckis's adaptation of his novel. In 1995, in *The Demon-Haunted World: Science as a Candle in the Dark*, Sagan said that

Science is not only compatible with spirituality; it is a profound source of spirituality. When we recognize our place in an immensity of light-years and in the passage of ages, when we grasp the intricacy, beauty, and subtlety of life, then that soaring feeling, that sense of elation and humility combined, is surely spiritual.

He would describe himself not as an atheist but as an agnostic. In a 1981 interview collected in *Conversations with Carl Sagan* (2006), he said that

An atheist is someone who is certain that God does not exist, someone who has compelling evidence against the existence of God. I know of no such compelling evidence. Because God can be relegated to remote times and places and to ultimate causes, we would have to know a great deal more about the universe than we do now to be sure that no such God exists. To be certain of the existence of God and to be certain of the nonexistence of God seem to me to be the confident extremes in a subject so riddled with doubt and uncertainty as to inspire very little confidence indeed.

In his novel *Contact* (1985), protagonist Ellie Arroway makes the same point when questioned about her religious beliefs, or lack thereof.

In one of my favourite passages, as she is driving through the early morning desert, her headlights sweeping ahead of her, she notices rabbits gathering on either side of the road. As each one in turn is hit by the beam of light, it stands up on its hind legs and watches until the light has past. This has obvious resonances with her team of radio astronomers – and by extension, the whole human race – picking up the alien transmission. But she also explicitly wonders if, in that moment, each rabbit is having a religious experience.

It is one of many moments in the novel where religion, spirituality and awe are probed from various directions.

And it is worth recalling that the novel itself expresses grave concern – omitted from the film – with the growing power of varieties of dispensationalist, prosperity-gospel Protestant fundamentalism, whose influence of American public life – and the practice of science – has only increased since then.

A few words about the film *Contact*.

In 1979, the production company Casablanca Pictures commissioned Sagan, who had recently won a non-fiction Pulitzer for *The Dragons of Eden* (1977) to develop a story for them to film. He was the most famous astronomer, possibly the most famous scientist, in America at that time, even though he had yet to make the PBS series *Cosmos* (1980). By the end of 1980, he and his co-author Anne Druyan had completed a 100 page story treatment. (Druyan was an author, who had also headed part of the NASA project about the golden discs of sound recordings that were attached to Voyager 1 and 2, in which Sagan was also involved, having previously designed the plaque for Pioneer. They married in 1981, his third and final wife, and she co-authored his later non-fiction books. She appears very briefly in

the film on an episode of *Crossfire* debating Rob Lowe, who seems to be in the film for no reason other than to be pretty. Which is kind of his career.)

Casablanca took the project to Warner Bros, where it got stuck in development hell. So Sagan and Druyan wrote the novel (the extent of her involvement remains unclear; he alone is credited as the author). It attracted a \$2 million dollar advance from Simon & Schuster, and became a best seller, selling 1.7 million copies in its first two years. This led to renewed interest in the film. Roland Joffe, fresh from Best Director Oscar nominations for *The Killing Fields* (1984) and *The Mission* (1986), was initially attached to direct. When he dropped out and it was offered to Robert Zemeckis, who turned it down, then to George Miller, who had just made *Mad Max Beyond Thunderdome* (1985) and *The Witches of Eastwick* (1987). Miller was fired because he was taking so long, and it was offered to Zemeckis again, who this time accepted, having recently wrapped up the *Back to the Future* trilogy (1989, 1990) and *Forrest Gump* (1994), for which he'd won best director Oscar. *Gump* seems to have inspired the use of digitally altered footage of Bill Clinton (after Sidney Poitier turned down the role of President) – footage which includes his serendipitous August 7 1996 press conference about the announcement that an Antarctic meteorite – almost certainly from Mars – seemed to contain microfossils of bacteria

Sagan died in December 1996, while *Contact* was still in production. Released the following June, it is dedicated to him.

Before we start, just a few words of warning. If there are any Matthew McConaughey fans here tonight, be aware you have to wait a full seventeen and a half minutes for him to get his shirt off.

If it is any consolation, the first several of those endless, utterly unconscionable minutes contain what was in 1997 the longest continuous CGI sequence in film – a record it held for seven years.

It is, I know, no consolation.